

## Power PCB Relay RZF

- 1 pole, 16A, 1 form A (NO)
- Coil power 530mW
- Reinforced insulation (EN 61810, 60335, 60730)
- Ambient temperature up to 85°C
- Quick connect terminals for load
- Low mounted height of 17.9mm (27.6mm with quick connects)
- WG version with material in accordance with IEC 60335-1

### Typical applications

Microwave ovens, water heaters, ovens, industrial equipment.



### Approvals

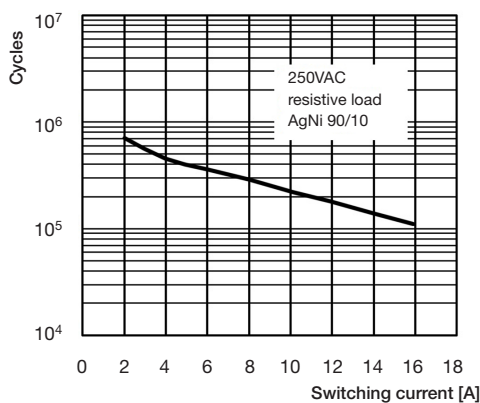
VDE 40046175, UL E214025, CQC 17002175064

Technical data of approved types on request.

### Contact Data

|  |  |  |
|--|--|--|
| Contact arrangement  | 1 form A (NO)  |  |
| Rated voltage  | 250VAC   |  |
| Max. switching voltage   | 400VAC   |  |
| Rated current  | 16A  |  |
| Limited making current,<br>form A contact, max. 4 s, duty factor 10% | 16A  |  |
| Switching power  | 4000VA   |  |
| Contact material   | AgNi   |  |
| Min. recommended contact load  | 100mA, 5VDC  |  |
| Frequency of operation, with/without load                            | 360/18000h <sup>-1</sup>                               |  |
| Operate/release time max.  | 8ms/6ms  |  |
| Bounce time max.   | 4ms  |  |
| Electrical endurance   |  |  |
| 16A, 250VAC, resistive, 23°C   | 100x10 <sup>3</sup> ops.                               |  |
| 16A, 250VAC, resistive, 85°C   | 50x10 <sup>3</sup> ops.                                |  |
| Contact ratings  | 16A, 250VAC, resistive, 23°C, 100x10 <sup>3</sup> ops. |  |
|  | 16A, 250VAC, resistive, 85°C, 100x10 <sup>3</sup> ops. |  |
| Mechanical endurance   | 10x10 <sup>6</sup> operations                          |  |

### Electrical endurance



### Coil Data

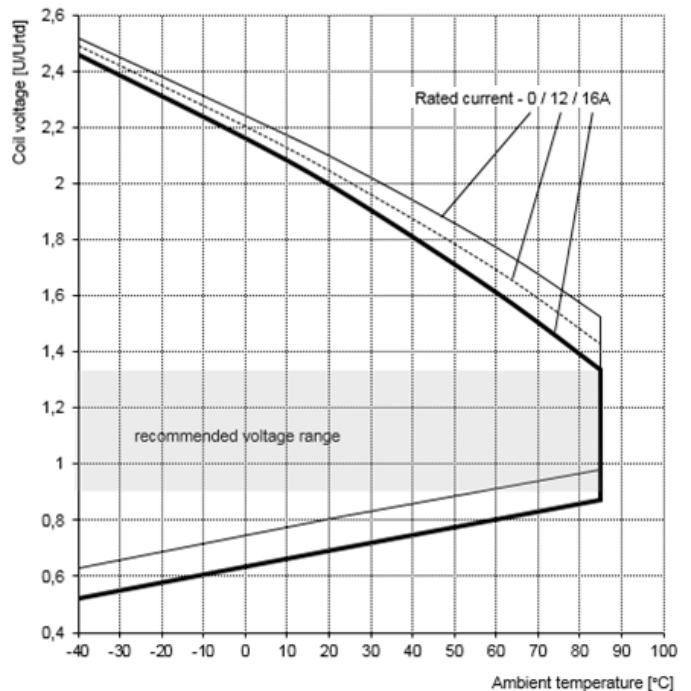
|                                     |            |
|-------------------------------------|------------|
| Coil voltage range                  | 5 to 48VDC |
| Coil operative range, IEC 61810     | 2          |
| Coil insulation system according UL | class F    |

### Coil versions, DC coil

| Coil code | Rated voltage VDC | Operate voltage VDC | Release voltage VDC | Coil resistance Ω±10% | Rated coil power mW |
|-----------|-------------------|---------------------|---------------------|-----------------------|---------------------|
| 005       | 5                 | 3.5                 | 0.5                 | 47.2                  | 530                 |
| 006       | 6                 | 4.2                 | 0.6                 | 66.6                  | 530                 |
| 009       | 9                 | 6.3                 | 0.9                 | 152.8                 | 530                 |
| 012       | 12                | 8.4                 | 1.2                 | 271.7                 | 530                 |
| 018       | 18                | 12.6                | 1.8                 | 611                   | 530                 |
| 024       | 24                | 16.8                | 2.4                 | 1086                  | 530                 |
| 048       | 48                | 33.6                | 4.8                 | 4347                  | 530                 |

All figures are given for coil without pre-energization, at ambient temperature +23°C.

### Coil Operating Range



## Power PCB Relay RZF (Continued)

### Insulation Data

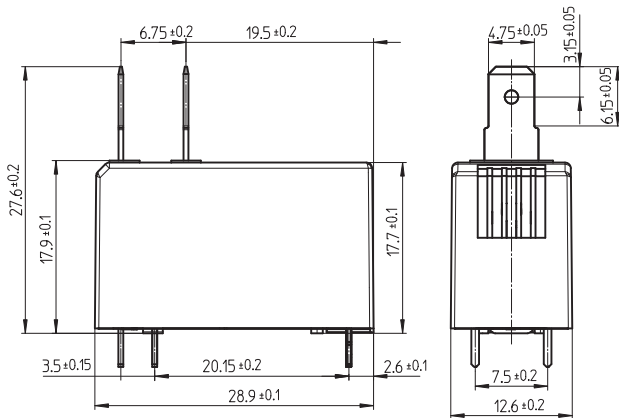
|                                    |                      |
|------------------------------------|----------------------|
| Initial dielectric strength        |                      |
| between open contacts              | 1000V <sub>rms</sub> |
| between contact and coil           | 5000V <sub>rms</sub> |
| Initial surge withstand voltage    |                      |
| between contact and coil           | 10000V               |
| Clearance/creepage                 |                      |
| between contact and coil           | ≥ 5.5/8mm            |
| Material group of insulation parts |                      |
|                                    | III                  |
| Tracking index of relay base       |                      |
|                                    | PTI 300              |

### Other Data

|   |                                      |
|---|--------------------------------------|
| Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at <a href="http://www.te.com/customer-support/rohssupportcenter">www.te.com/customer-support/rohssupportcenter</a> |                                      |
| Resistance to heat and fire   | According EN 60335-1, par. 30        |
| Ambient temperature   | -40 to 85°C                          |
| Category of environmental protection  |                                      |
| IEC 61810   | RTII - flux proof                    |
| Vibration resistance (functional), 3 to 100Hz   | >20g                                 |
| Shock resistance (functional)   | >10g                                 |
| Shock resistance (destructive)  | >100g                                |
| Terminal type   | PCB-THT, quick connect for load side |
| Weight  | 11g                                  |
| Resistance to soldering heat THT  |                                      |
| IEC 60068-2-20  | 270°C/10s                            |
| Packaging/unit  | tube/20 pcs.<br>box/500 pcs.         |

### Dimensions

RZF1-...-....

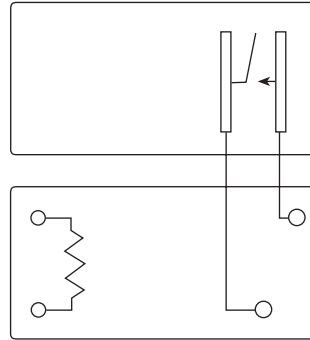


Terminal dimensions: Coil-Terminal: 0.5±0.025  
Contact-Terminal: 0.5±0.01 x 0.8±0.05

- All terminal dimensions valid for the unfinned terminal
- For the tin-plating of the pins add +0,1mm for the width, thickness or diameter.

### Terminal assignment

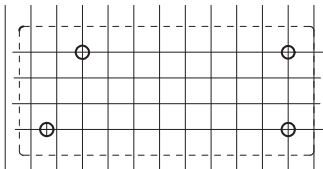
Bottom view on solder pins



### PCB layout

Bottom view on solder pins

RZF1-...-....



grid pattern: 2.50 to 2,54  
hole diameter: ø1.3 ±0,1  
Bottom view on solder pins  
dimensions in mm

**Power PCB Relay RZF** (Continued)

|                               |  |   |          |                             |          |              |          |           |            |            |
|-------------------------------|--|---|----------|-----------------------------|----------|--------------|----------|-----------|------------|------------|
| <b>Product code structure</b> |  | Typical product code  |          | <b>RZF</b>                  | <b>1</b> | <b>-1A</b>   | <b>4</b> | <b>-L</b> | <b>012</b> | <b>000</b> |
| <b>Type</b>                   | <b>RZF</b>                                     | Power PCB Relay RZF   |          |                             |          |              |          |           |            |            |
| <b>Version</b>                | <b>1</b>                                       | 16A, 3.5mm pinning, 4 PCB pins                                |          |                             |          |              |          |           |            |            |
| <b>Contact configuration</b>  | <b>1A</b>                                      | 1 form A (NO) contact   |          |                             |          |              |          |           |            |            |
| <b>Contact material</b>       | <b>4</b>                                       | AgNi 90/10  | <b>6</b> | AgNi 90/10, special version |          |              |          |           |            |            |
| <b>Coil version</b>           | <b>L</b>                                       | DC coil, 530mW  |          |                             |          |              |          |           |            |            |
| <b>Coil voltage</b>           | Coil code: please refer to coil versions table |   |          |                             |          |              |          |           |            |            |
| <b>Suffix</b>                 | <b>000</b>                                     | Standard, RT II, Reinforced flux proof, IEC 60335-1 Compliant |          |                             |          | <b>Other</b> | Special  |           |            |            |

Note: May be followed by up to five additional characters for manufacturer internal identification.

| Product code  | Version    | Contact       | Cont.material     | Coil power | Coil voltage | Sealing    | Part number |
|---------------|------------|---------------|-------------------|------------|--------------|------------|-------------|
| RZF1-1A4-L005 | 4 PCB pins | 1 form A (NO) | AgNi 90/10 (std.) | 530mW      | 5VDC         | Flux proof | 1833011-1   |
| RZF1-1A4-L006 |            |               |                   |            | 6VDC         |            | 1833011-2   |
| RZF1-1A4-L009 |            |               |                   |            | 9VDC         |            | 1833011-3   |
| RZF1-1A4-L012 |            |               |                   |            | 12VDC        |            | 1833011-4   |
| RZF1-1A4-L018 |            |               |                   |            | 18VDC        |            | 1833011-5   |
| RZF1-1A4-L024 |            |               |                   |            | 24VDC        |            | 1833011-6   |
| RZF1-1A4-L048 |            |               |                   |            | 48VDC        |            | 1833011-7   |
| RZF1-1A6-L005 |            |               | AgNi 90/10 (spl.) |            | 5VDC         |            | 2-1833011-8 |
| RZF1-1A6-L006 |            |               |                   |            | 6VDC         |            | 1-1833011-5 |
| RZF1-1A6-L009 |            |               |                   |            | 9VDC         |            | 1-1833011-6 |
| RZF1-1A6-L012 |            |               |                   |            | 12VDC        |            | 1-1833011-7 |
| RZF1-1A6-L018 |            |               |                   |            | 18VDC        |            | 1-1833011-8 |
| RZF1-1A6-L024 |            |               |                   |            | 24VDC        |            | 1-1833011-9 |
| RZF1-1A6-L048 |            |               |                   |            | 48VDC        |            | 2-1833011-0 |



General Purpose  
Power PCB Relays

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**Power PCB Relay RZF** (Continued)

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